

How Much Will That Trail Cost?

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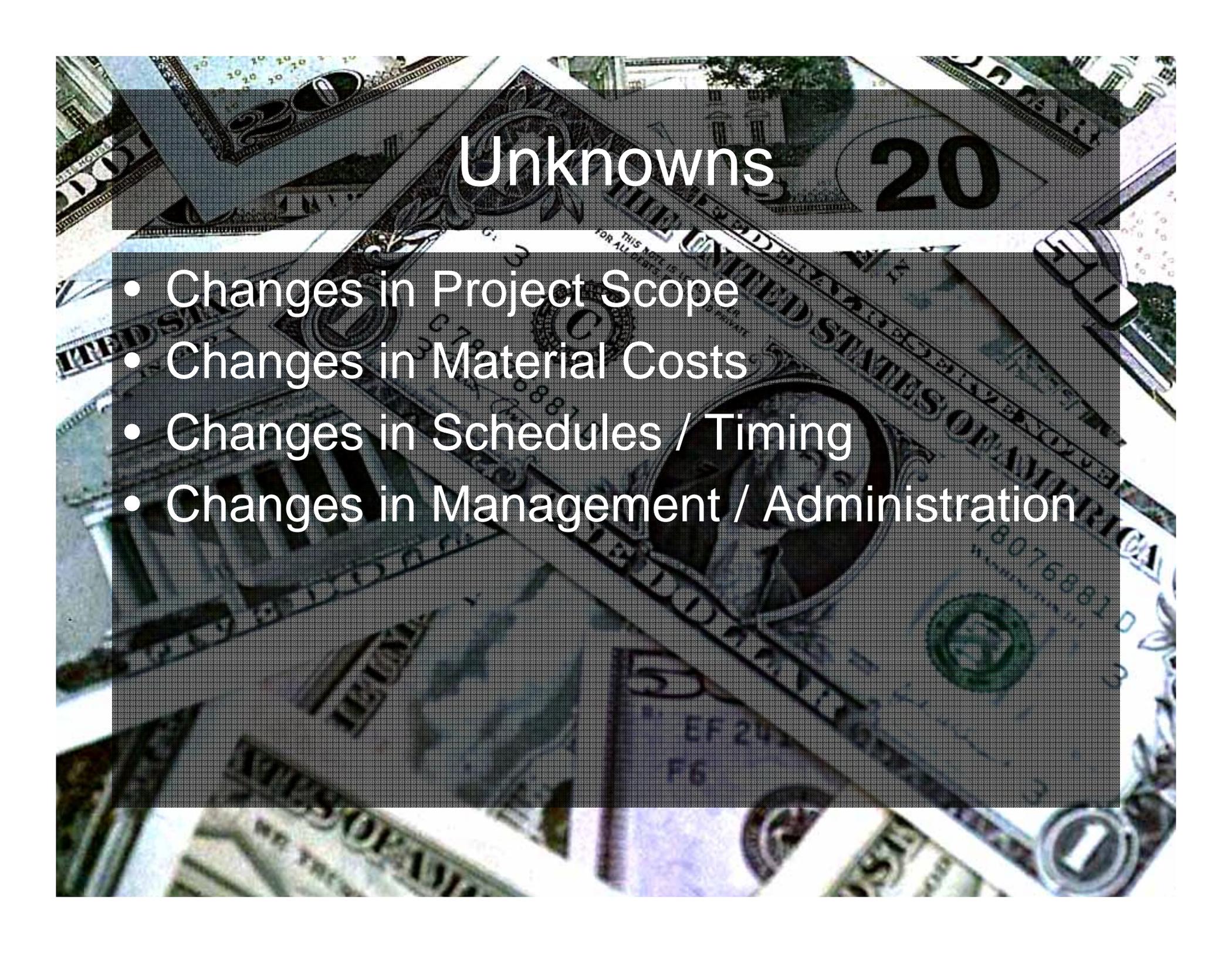
Trails and Greenways Conference

May 11, 2007

The background of the slide is a collage of various US dollar bills, including \$100, \$20, and \$10 bills, arranged in a slightly overlapping and tilted manner. The bills are rendered in a dark, semi-transparent style, allowing the text to stand out clearly.

Costs

- Cost to Plan (environmental, design)
- Cost to Build
- Cost to Operate
- Cost to Maintain

The background of the slide is a collage of various US dollar bills, including \$20 and \$100 bills, arranged in a pattern that suggests movement and value. The bills are slightly blurred and overlapping, creating a sense of depth and complexity.

Unknowns

- Changes in Project Scope
- Changes in Material Costs
- Changes in Schedules / Timing
- Changes in Management / Administration

HOW MUCH WILL THAT TRAIL COST?

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Trail construction cost factors:

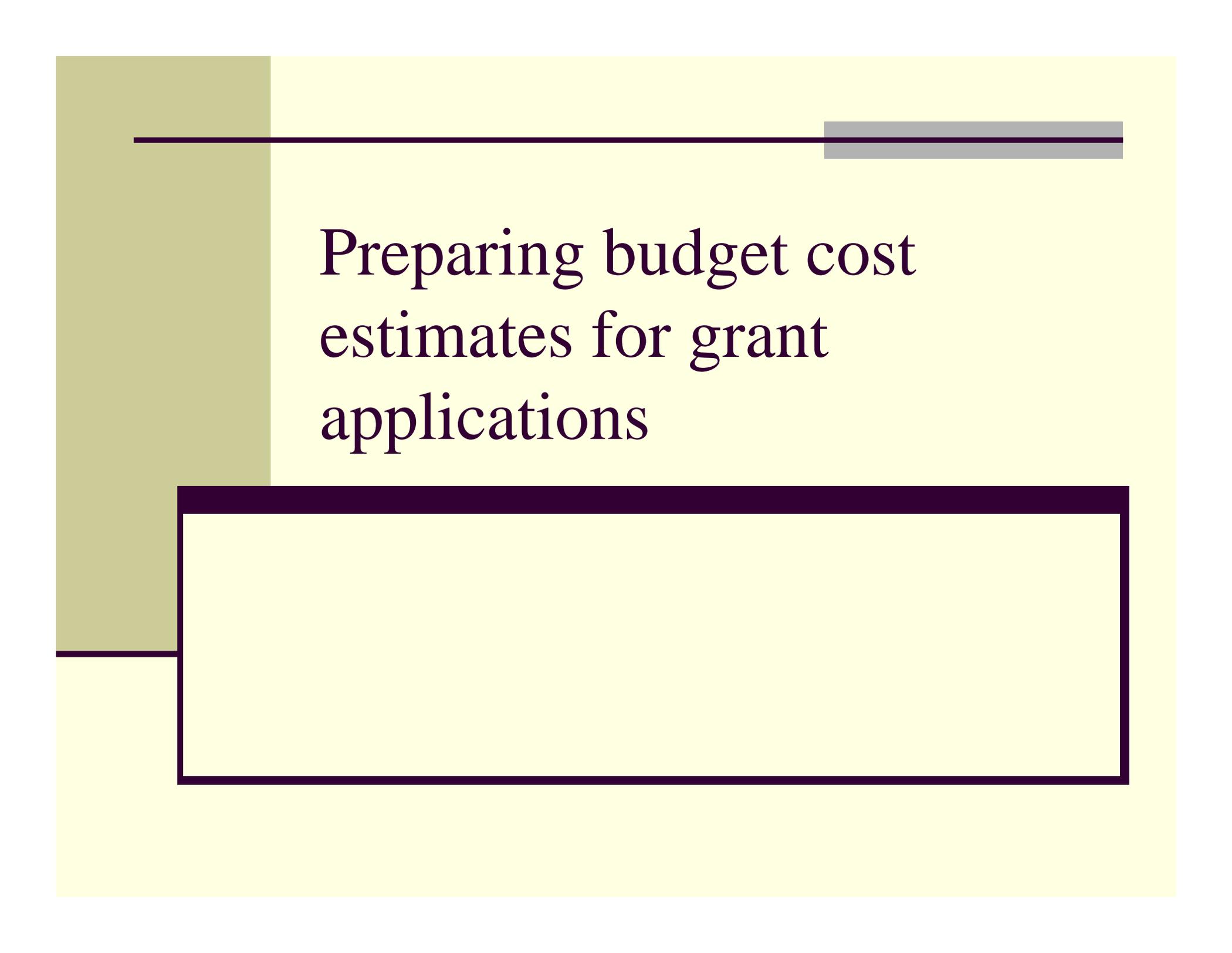
- 1.1 Materials: Highway and trail construction material costs have increased disproportionately over recent year
 - **Fuel costs affect delivery of materials to sometimes remote sites**
 - **Heavy equipment costs (steel, fuel, tires) are a higher proportion of trail and highway costs than other construction types**
 - **Asphalt costs have risen dramatically**
 - **Stone and gravel costs affected by fuel and equipment cost increases**
 - **Attached graph shows changes in producer price index for highway and street construction materials versus other construction types**

■ 1.2 Labor: Construction labor costs have been more moderate over recent years; 3%-5% p.a.

- **Labor resources for prevailing wage contractors have been tight in recent years, in common with construction generally**
- **Drop-off in residential construction volume in 2006-2007 not likely to benefit highway/trail construction resources & costs to any significant degree.**

1.3 Market factors: Heavy demand for all construction resources in California over recent years.

- Drop-off in residential construction likely to be picked up by non-residential and public construction spending over the next few years.
- In a tight market, a project that is well designed and clearly defined will attract more and better bids and result in lower bid costs. In particular, avoid :
 - Confusion, discrepancies, contradictions in scope or design of the project
 - Excessive or confusing alternate cost packages (add or deduct)
 - Unrealistically tight construction period



Preparing budget cost estimates for grant applications

2.1 Scope:

- Clearly define the scope of the project - how many feet/miles of trail, location and limits of construction areas, temporary and permanent fences, mitigation of damage to wildlife areas and habitats

2.2 Quantities: Calculate approximate quantities of typical trail components:

- Site prep. and grading - Cu. Yards
- Trail surface and base materials - Sq. Ft.
- Curbs & edgings - Lin. Ft.
- Fences and gates - Lin. Ft. & count for gates
- Storm water drainage - usually site specific; catch basins, SD piping and trenching, storm water detention basins, outfalls and headwalls
- Trail lighting and power outlets if required - per lighting standard; include for trench, conduit and wiring to power source
 - (continued on next slide...)

2.2 continued...

- Drinking water fountains - include piping and trenching from point of connection
- Retaining walls - Lin. Ft. & Sq. Ft.; minimize if possible
- Planting and irrigation - Sq. Ft.
- Mitigation of damage to wildlife areas and habitats - site specific
- General Contractor management and fee
- Soft costs - design, construction management, permits

2.3 Pricing: Sources of unit pricing:

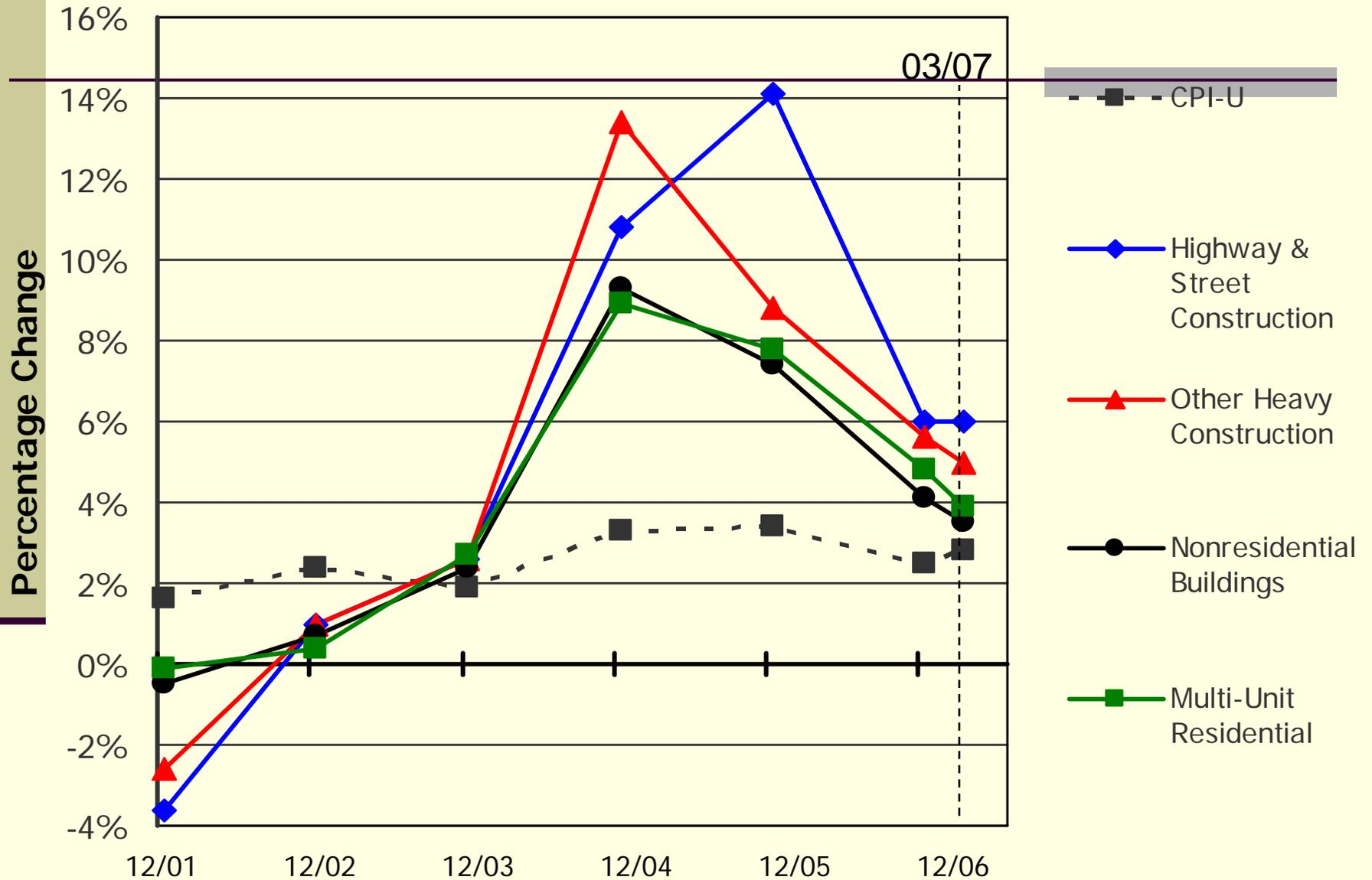
- Means Site Work & Landscape Cost Data 2007 - [www.rsmeans.com/ bookstore/ detail.asp?sku=65287](http://www.rsmeans.com/bookstore/detail.asp?sku=65287)
- Caltrans Contract Cost Data - download at www.dot.ca.gov/hq/esc/oe/awards/ (very large files!)
- Professional construction cost consultant

2.4 Allowances & markups: Add 15%-20% contingency for unforeseen items in early stage estimates; less at later, better defined stages

- Include an allowance for anticipated construction cost escalation to the anticipated mid-point of the construction period. Currently we recommend 8%-10% p.a.

Changes in PPIs for Construction Types

(12-Month Change through Month Shown)





**City of Folsom
Parks & Recreation Department**



Urban Bike Trail Maintenance

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City of Folsom Bike Trails

- We currently have 32 miles of Class I bike trails;
- We've received \$5.1 million dollars in grant funding...and counting.
- We have 35 bike/ pedestrian bridges;
- We have 5 bicycle undercrossings;
- 20 miles of proposed Class I bike trails to construct;
- 10 kiosks;
- 1 Mountain Bike Skills Park;
- 1 BMX Park;
- 30 Bike Lockers;
- And 25 dog stations.

How we maintain our bike trails...

1. **City Maintenance Crews** (Work Orders, Emergencies, Installation of Signs, etc.)
2. **Contractual** (Weeding, Edging, Pruning, Blowing)
3. **Prison Labor** (Weed abatement, fire breaks, retaining wall install, kiosk install, bench install, etc.)
4. **Service Groups** (trash pick-up, shrub planting, tree planting, etc.)
5. **Volunteers** (Mulch install, bridge maintenance, tree planting, etc.)
6. **Adopt-a-trail Program** (trash pick-up once a month)

Maintaining the trails...



What does bike trail maintenance consist of?

- Weed Control (Shoulders)
- Leaf Blowing
- Tree Maintenance/ Pruning
- Sweeping Debris & Erosion
- Vector Control
- Sign Maintenance/ Installation
- Graffiti Removal
- Retaining Wall Repair
- Staining of wood structures
- Erosion Control

Examples...



Examples cont...



How do we monitor trail maintenance?

- Residents (Walking, Cycling, Running, etc.)
- Maintenance Staff
- Bike Commuters
- Service Groups
- Routine Inspections (Weekly, Monthly, Bi-Annual, etc.)

Trail Maintenance Budget

1. **General Fund**

- a. \$41,600 current trail maintenance budget for FY 06/07
- b. Approximately \$1,600 / mile for bike trail maintenance for the Fiscal Year was estimated.
- c. This budget does not include any substantial repairs.

2. **Estimating Budget**

Budget is estimated at how many trails are anticipated to be development in the upcoming fiscal year based on previous year averages.

3. **Renovation Projects**

- a. \$350,000 is allocated each FY for Park and Trail Renovation Projects.
- b. The adopted "Parks & Recreational Facilities Renovation Master Plan" was adopted by City Council in May 2003.
- c. Renovation Funds are collected from Cell Tower revenue and deposited into a account which is accrued for Future Renovation Projects.

Trails – Estimated Useful Life

RENOVATION MASTER PLAN 2003			
TRAILS: USEFUL LIFE & ESTIMATED COSTS			
Hardscaping (Trail Surfaces)			
Items	Materials/Description	Useful Life	Unit Price
<i>Bike Trails (class I)</i> (Generally 10 Feet Wide)			
Asphalt Resurfacing/Chip Seal	Resurface asphalt surface w/ Chip Seal & center line striping	10 years	\$ 0.50 SF
Asphalt Overlay	1" overlay of asphalt w/ centerline striping	20 years	\$ 1 SF
Concrete	Removal and replacement	50 years	\$ 7 SF
Decomposed Granite (DG)	Replacement of D.G	5 years	\$ 1 SF
Aggregate Sub-base (AB)		6 years	\$ 3 SF
Concrete Containment Curb		50 years	\$ 15 LF
Parking Lot			
Items	Materials/Description	Useful Life	Unit Price
Asphalt Overlay	1" Overlay of asphalt, repair, restripe & paint handicap logo	20 years	\$ 1.50 SF
Lighting	Poles and lighting fixtures	30 years	\$1,500 EA
Structures			
Items	Materials/Description	Useful Life	Unit Price
Concrete Undercrossings	Complete Replacement	50 years	\$ 150 LF
Concrete Bridges	Complete Replacement	50 years	\$ 400 LF
Wood Bridges	Complete Replacement	20 years	\$ 500 LF
Steel Bridges/overcrossings	Complete Replacement	30 years	\$ 750 LF
Boardwalk	Complete Replacement	20 years	\$ 400 LF
Replace wood Deck	Steel frame bridge with wooden deck	20 years	\$ 100 LF
Site Equipment / Furniture (Support Facilities)			
Items	Materials/Description	Useful Life	Unit Price
Doggie Stations	Complete Replacement	15 years	\$ 1,200 EA
Benches	Custom: Recycled Plastic with cobble siding	15 years	\$ 1,200 EA
Barrier Posts	6" x 6" pressure treated posts	15 years	\$ 12 LF
Bike Lockers	Metal lockers - 2 bikes per locker	10 years	\$350 EA
Kiosks	Redwood structure, cobble base, with composite shingle roof	15 years	\$ 2000 EA
Trash Cans	Metal container w/ concrete base	15 years	\$ 500 EA
Fencing			
Items	Materials/Description	Useful Life	Unit Price
Tubular Steel	Painted black - similar to wrought iron	20	\$ 40 LF
Post & Cable	4 x 4 x 6 wooden posts & metal cable	15	\$ 10 LF

Department Summary

RENOVATION MASTER PLAN 2003							02/03 - 07/08
Total Cost Projections							
Sheet Number	Division Name	7/2003-6/2004	7/2004-6/2005	7/2005-6/2006	7/2006-6/2007	7/2007-6/2008	5Yr Projection
1	PARKS						
	Total Annual Projection	\$1,882,502	\$165,340	\$78,433	\$272,516	\$27,650	
	5 Year Projections						\$2,426,442
2	FACILITIES						
	Total Annual Projection	\$97,000	\$0	\$0	\$384,225	\$24,041	
	5 Year Projections						\$505,266
3	AQUATICS CENTER						
	Total Annual Projection	\$0	\$0	\$0	\$0	\$0	
	5 Year Projections						\$0
4	TRAILS						
	Total Annual Projection	\$0	\$51,665	\$107,459	\$0	\$93,677	
	5 Year Projections						\$252,800
	TOTAL PROJECTION						
	Total Annual Projection	\$1,979,502	\$217,005	\$185,892	\$656,741	\$145,368	
	5 Year Projections						\$3,184,508

Why have trails?

- Improved Quality of Life
- Safety
- Recreating
- Exercise
- Healthy Lifestyle
- Healthy Body is a Healthy Mind
- Obesity & Diabetes Prevention
- Camaraderie (Group rides)
- Wildlife Viewing
- Habitat Restoration
- ADA Accessibility
- Property Values +
- Serenity
- FUN!!!

Good times on the trails...



Cont...



See YOU on the Trails!!!

